

January 14, 2003

Christine Valentine
OR Dept. of Land Conservation and
Development
635 Capitol Street, NE
Suite 150
Salem, OR 97301

RE: Coastal Zone Consistency Determination Comments for the Columbia River Channel Deepening Project.

Dear Christine:

Clatsop County, with the assistance of the Columbia River Estuary Study Task Force (CREST) has reviewed the Draft Supplemental Integrated Feasibility Report and Environmental Impact Statement for the Columbia River Channel Improvement Project for consistency with Clatsop County regulations.

Response: The Corps revised key elements of the Project in Clatsop County in response to comments received on the Draft SEIS. The Corps consistency determination submitted to DLCD includes those revisions. The County's comments, unfortunately, are not based on the project that was the subject of the consistency analysis.

Although Clatsop County is conducting this review, it in no way replaces or reduces the requirement for obtaining permits from the County for all dredged material disposal actions associated with this project (or any other) that are proposed to take place within Clatsop County.

Response: This statement is inconsistent with Section 5.125 of the LWDUO, which provides:

Federal activities in the Coastal Zone are not subject to the established local permit procedures . . . The federal agency has the option of applying for a local permit to demonstrate consistency with the [Comprehensive Plan and Zoning Ordinance].

We understand that CREST has supplied this sentence to the County (CREST provided identical text to Wahkiakum County). It is disappointing, however, that the County included this misstatement of Clatsop County law without review.

Upon review, Clatsop County has concluded that the project remains inconsistent with the following enforceable policies: Clatsop County Comprehensive Plan, the Clatsop County Land and Water Use and Development Ordinance, the Columbia River Estuary Aquatic Use and Development Standards, and the Columbia River Estuary Dredged Material Management Plan.

Activities of the Channel Deepening Project that will occur within Clatsop County include:

- Dredging of the 600'-wide navigation channel in specific locations between river mile 20 and river mile 52 to deepen the channel from it's existing 40' depth to the proposed 43' depth;

Enclosure 1

- Flow-lane disposal in/or adjacent to the navigation channel in depths between 50 and 65'
- Flow-lane disposal in areas greater than 65' depth at river mile 5 and between river miles 29 and 40
- Upland disposal on Sand Island
- Upland disposal on Rice Island
- Upland disposal on Tenasillahe Island
- Upland disposal on Welch Island
- Upland disposal on Pillar Rock Island
- Upland disposal on Miller Sands spit
- Pile dike construction and in-water disposal at Miller/Pillar "Restoration" Feature
- In-water disposal at Lois/Mott Island "Restoration" Feature
- In-water disposal at two sump locations: Harrington Sump, Sump for Lois/Mott

Response: The Columbia River Channel Improvement Project (CRCIP) begins at Columbia River mile 3.0 in Clatsop County and not river mile 20. Dredging of the channel for the CRCIP also includes up to 5-feet of advance maintenance dredging and 100 feet of overwidth dredging in high volume areas, as currently practiced for the 40-foot channel. Sand Island (Clatsop County) is not a disposal site proposed for use. The James River location (O-42.9) is an upland disposal site in Clatsop County that was not listed.

CLATSOP COUNTY COMPREHENSIVE PLAN - GOALS AND POLICIES

Goal 16 and 17 - Estuarine Resources and Coastal Shorelands

Goal 16

To recognize and protect the unique environmental, economic, and social values of each estuary and associated wetlands; and

To protect, maintain, where appropriate develop, and where appropriate restore the long-term environmental, economic, and social values, diversity and benefits of Oregon's estuaries.

Goal 17

To conserve, protect, where appropriate, development and where appropriate restore the resources and benefits of all coastal shorelands, recognizing their value for protection and maintenance of water quality, fish and wildlife habitat, water-dependent uses, economic resources and recreation and aesthetics. The management of these shoreland areas shall be compatible with the characteristics of the adjacent coastal waters; and

To reduce the hazard to human life and property, and the adverse effects upon water quality and fish and wildlife habitat, resulting from the use and enjoyment of Oregon's coastal shorelands.

Columbia River Estuary Shoreland And Aquatic Regional Policies (P.20)

P20.2 - Aquaculture And Fisheries

The policies in this subsection apply to all projects that could conceivably affect fisheries (either commercial or recreational) or aquaculture in the Columbia River Estuary. This subsection is also applicable to the development of aquaculture facilities and to fisheries enhancement projects.

1. *Traditional fishing areas shall be protected when dredging, filling, pile driving or when other potentially disruptive in-water activities occur.*

A historic gillnet drift exists at the location of the proposed Miller/Pillar pile "restoration" site. The siting of the proposed pile dike field and dumping of dredged material between the pile dikes would significantly and permanently impact this traditional fishing area. Disposal at this site will effectively displace fishermen from fishing their historic gillnet drift. Fishers were not consulted during the development of the project.

Response: This policy addresses "disruptive in-water activities" such as dredging, filling, and pile driving. The policy should not be applied to restoration projects. To the extent the policy does apply, it is limited to the time construction of the project is occurring. The Corps could schedule the construction of the Miller Pillar restoration project to avoid disruption to the fishing area.

3. *Increased hatchery production and other fish enhancement efforts shall be supported where feasible, and when consistent with other applicable plan provisions.*

The CEDC Net Pen Terminal fishery is located at Tongue Point. The in-water disposal site proposed for the Lois/Mott Island embayment would be contradictory to the policy of supporting these efforts. In fact, the CEDC Fishery Project program manager has stated that the filling of the embayment would reduce the number of gillnet licenses fishing in the area from 192 this past year to less than a dozen, thus rendering the program economically infeasible in the area resulting in negative economic impacts to Clatsop County.

Response: This restoration project itself is a "fish enhancement effort" that restores tidal marsh habitat, the most valuable to salmonids and the most limited habitat type in the estuary. In addition, this comment appears to be based on the alternative presented in the draft SEIS, rather than the alternative that was the subject of the CZMA determination. Under this alternative 81% of the embayment would remain available for fishing. There is ample room for commercial fishermen to continue to fish in the Tongue Point Select Area Fishery post-implementation of the tidal marsh restoration feature and a cut in the number of participants to the level indicated would be unwarranted and unsupported. Commercial fishermen participating in the Select Area Fishery have amply demonstrated their ability to utilize much smaller locations (e.g. Blind Slough, South Channel, Knappa Slough, Deep River, and Steamboat Slough) to successfully gillnet net pen reared salmon. The area remaining in the Tongue Point SAF post-implementation of the restoration feature would well exceed the acreage available in these other locations. The current Select Area Fishery Program is not self-supporting and is reliant upon BPA monies for operation and maintenance. In addition information obtained from the Oregon Department of Fish and Wildlife after the FSEIS was released indicates that the terminal fishery releases of spring Chinook in this area is being cut back because of straying problems that is causing intermingling of hatchery and wild stocks. Unless the straying issue is resolved during a 3-year experimental period, this component of the Tongue Point Select Area fishery would have to be

discontinued. Consequently the impact on the terminal fishery is less than identified in the FSEIS.

5. *Existing aquaculture and hatchery facilities and areas identified as having significant aquaculture potential shall be protected from conflicting uses.*

The CEDC Net Pen Terminal fishery is located at Tongue Point. The in-water disposal site proposed for the Lois/Mott Island embayment would be a conflicting use. The use of the embayment as a dredged material disposal site would necessarily preclude the use of the embayment as a fishing area associated with the CEDC Fisheries project.

Response: This policy pertains to aquaculture and hatchery “facilities,” not to terminal area fisheries. The policy does not apply to the Lois Mott restoration project because the restoration project is designed to avoid entirely the location of the CEDC Net Pen, which is the aquaculture facility in this situation. In addition, information provided by ODFW after the FSEIS was published raises serious questions about whether the embayment has significant aquaculture potential because the hatchery raised fish have been intermingling with the wild stocks. The terminal fishery program is being cut back to determine whether this straying problem can be resolved. See response above for additional information. The restoration project uses dredged material to help create tidal marsh habitat that will be monitored and evaluated in collaboration with federal and state resource agencies. It is not a disposal site. Once it is created, the tidal marsh habitat will not be disturbed or used again as are disposal sites.

P20.4 - Diking

The policies in this subsection apply to the construction, maintenance and repair of flood control dikes in Columbia River Estuary shoreland and aquatic areas. These policies do not apply to dredge material containment dikes.

1. *Deliberate dike breaching or removal may be permitted as part of a restoration or mitigation project. Productive agricultural land, significant wildlife habitat, and major marshes shall not be lost as a result of dike breaching activities unless an exception is approved.*

An exception would be required for the dike breaching on Tenasillahe Island. The LCREP Science Work Group, in their comments on the SEIS, voiced some reservations about the project. Their main concern centered on the uncertainties associated with the relocation of the Columbia White-tailed deer and with the long time frame before any benefits would be realized. The Science Work Group also noted that an existing project on Tenasillahe Island to improve habitat for migratory birds would be negated by the project presented in the SEIS.

Response: Both the Biological Opinion and the SEIS acknowledge that there are some trade offs to attain implementation of the long-term feature. The Tenasillahe Island long term project would not go forward until Columbian White-tailed deer are removed from the ESA list which is dependent upon attainment of recovery plan objectives for establishment of three secure and viable populations of the species. The future development of 1,778 acres of tidal marsh habitat via dike breaching at Tenasillahe Island would alter the small-scale wetland development that has occurred recently interior to the dikes. However, the proposed tidal marsh development would also provide excellent waterfowl habitat, as evidenced in the existing tidal marsh habitat in the estuary. Further, the proposed action would also

benefit a multitude of fish and wildlife species currently not afforded access or benefiting from detrital export currently precluded by the presence of the dikes. Juvenile salmonids would be an excellent example of a species complex that would benefit substantially from opening up the dikes at Tenasillahe Island. Tenasillahe Island represents the best location and largest single acreage for tidal marsh restoration in the Columbia River estuary. The loss of wetland habitat improvements interior to the Tenasillahe Island levees is inconsequential to the overall gain associated from reconnection of Tenasillahe Island to tidal influence.

P20.5 - Dredging And Dredged Material Disposal

Policies in this subsection are applicable to all estuarine dredging operations and to both estuarine shoreland and aquatic dredged material disposal in the Columbia River Estuary.

1. Dredging shall be allowed only:

- (a) If required for navigation or other water-dependent uses that require an estuarine location or if specifically allowed by the applicable management unit requirements and,***
- (b) If a need (i.e., a substantial public benefit) is demonstrated and the use or alteration does not unreasonably interfere with public trust rights; and,***
- (c) If adverse impacts are minimized.***

Adverse impacts to the Columbia River Estuary will be significant as a result of this project. The County is concerned that impacts to several of the important resources in the river have not been adequately addressed.

Response: This statement misapplies the standard in the policy. Standard 1(c) requires impacts to be minimized, not that a project has no significant impacts. Impacts have been minimized in the proposed plan. The statement does not explain which impacts are of concern, or provide information suggesting that impacts could be further minimized. In addition, dredging the federal navigation channel will enhance the public trust right of navigation consistent with Standard 1(b).

Furthermore, the Biological Opinion associated with the project repeatedly states that short-term negative impacts to fish and wildlife, including ESA-listed species, will occur during the dredging and disposal associated with this project, and that long-term impacts are uncertain.

Response: This statement misrepresents the findings of the Biological Opinion. With respect to the Lois Island and Miller-Pillar restoration projects, the Biological Opinion recognizes that there will be negative short-term impacts to ESA-listed salmonids from the construction of the projects. However, the Opinion concludes that the Lois Island project "will be beneficial to ESA-listed salmonids in the long term because, as tidal marsh habitats recolonize, primary (plant) and benthic productivity should approach historical levels," and the Millar-Pillar project "will benefit ESA proposed and listed salmonids by providing more productive habitats for benthic invertebrates and thus juvenile salmonids as well." (Biological Opinion at pages 67-69.) Short-term negative impacts to fish and wildlife, including ESA-listed species, are of course to be expected due to project related actions, including habitat restoration with dredged material. The prescribed actions to improve overall future habitat conditions will result in habitat changes which will necessarily adversely affect some species, including those that will ultimately see significant

benefit from the action. The net benefit of the proposed restoration actions outweighs initial adverse affects.

The Biological Opinion includes a requirement for adaptive management in order to address the uncertainty of long-term impacts.

In the Estuary region, a substantial public benefit has not been demonstrated. In fact, the two "restoration" dumpsites will negatively impact recreational fishers, commercial fishers, recreational boaters, and a County Economic Development Council Fisheries project.

Response: This sentence misstates the standard in 1(b). Standard 1(b) states that "Dredging shall be allowed only . . . if a need (i.e., a substantial public benefit) is demonstrated." The standard does not require the applicant to demonstrate a substantial benefit in the "Estuary region." The cost benefit analysis demonstrates that the deepening project overall creates a significant public benefit.

Although the standard applies to dredging, the Project overall does include the following restoration features that benefit the estuary: 1) purple loose strife control, 2) tide gate retrofits at Deep River, Grizzly Slough and Hall Creek, 3) Lois Island Embayment, 4) Tenasillahe Island, and 5) Millar-Pillar restoration. With respect to recreational and commercial fishers, see responses to P20.2 (3&5).

2. Dredging and dredged material disposal shall not disturb more than the minimum area necessary for the project and shall be conducted so as to minimize impacts on wetlands and other estuarine resources. Loss or disruption of fish and wildlife habitat and damage to essential properties of the estuarine resource shall be minimized by careful location, design, and construction of:
 - (a) Facilities requiring dredging,
 - (b) Sites designated to receive dredged material, and
 - (c) Dredging operation staging areas and equipment marshalling yards.

Neither the Miller/Pillar nor the Lois/Mott proposed dumpsites are designated as in-water dredged material disposal sites in the local dredged material management plan. Likewise, the proposed sump location to be used as a rehandling site before the final disposal of the dredged material in the Lois/Mott Island embayment (river mile 18-20) is not a designated sump disposal site.

Response: This analysis mischaracterizes the action at Lois Island embayment and Miller/Pillar and misstates the standard. As discussed above, these features are restoration/enhancement projects, not "dump sites." The Clatsop County zoning code allows estuarine enhancement and related fills in this zone.

This policy does not require that sand be placed in "designated" sites. The policy's language says that "Loss or disruption of fish and wildlife habitat and damage to essential properties of the estuarine resource shall be minimized by careful location, design, and construction of . . . sites designated to receive dredged material." The Corps has designated sites as part of the project and has "located and designed" the sites and will "construct" them to minimize impacts.

Miller Sands and Welch Island are not consistent with the *Columbia River Estuary Dredged Material Management Plan* (1986). Miller Sands is presently a designated dredged material disposal site. The area is a highly erosive site and is zoned as both aquatic and upland. The problem is that the area is zoned as a 98-acre disposal site, but

current and past disposal practices have changed the area to a 151-acre disposal site. A map amendment is required.

Response: This statement misrepresents the Columbia River Estuary Dredged Material Management Plan (1986). This Plan explicitly states on its very first page that "[t]he Plan is not intended to be an exhaustive list of all possible disposal sites and it in no way restricts the disposal of dredged materials to designated sites only." More importantly, P20.5 does not adopt the CREST Plan.

Welch Island is presently a designated dredged material disposal site identified in the CREDMMP (1986). The area is zoned as AC-2 (Aquatic Conservation). The problem is that the Corps has been dumping material here for years resulting in the area becoming an upland site. The Corps plans continued dumping here with continued seeding to benefit wildlife. A text and map amendment is required to change the AC-2 zone to CS (Conservation Shoreland) upland zoning.

Response: The Corps has been communicating with CREST and Clatsop County since at least 1998 in an attempt to change the zoning for the Welch Island disposal site. (See attached letter to CREST, dated July 21, 1998.) We have provided all the necessary information; however, the County has not taken any action.

An update to the CREDMMP has been completed recently and includes amendments that address the Miller Sands and Welch Island inconsistencies. This plan has not yet been adopted by Clatsop County. Therefore, these sites remain inconsistent with the County's regulations at this time.

Dredged materials shall not be placed in intertidal or tidal marsh habitats or in other areas that local, state, or federal regulatory agencies determine to be unsuitable for dredged material disposal. Exceptions to the requirement concerning disposal in an intertidal or tidal marsh area include use of dredged material as a fill associated with an approved fill project or placement of dredged materials in the sandy intertidal area of a designated beach nourishment site. Land disposal shall enhance or be compatible with the final use of the site area.

The Deepening proposal includes disposal sites that have not been deemed as suitable for dredged material by the local jurisdiction. The *Columbia River Estuary Dredged Material Management Plan* was recently updated. The updating process included coordination with state and federal resource agencies and local jurisdictions.

Response: Lois Mott and Millar/Pillar are restoration projects that meet the Clatsop County code definition of restoration and enhancement, not disposal sites. The federal regulatory agencies endorse these restoration projects. Local zoning explicitly permits enhancement and/or restoration. There is no dispute that the Lois Island embayment has been excavated. There should be no question that to restore the functions and values of this area to marsh habitat requires increasing the bottom elevation.

3. *The timing of dredging and dredged material disposal operations shall be coordinated with state and federal resource agencies, local governments, and private interests to protect estuarine aquatic and shoreland resources, minimize interference with recreational and commercial fishing operations, including snag removal from gillnet drifts, and insure proper flushing of sediment and other materials introduced into the water by the project.*

No timing windows are proposed for either the dredging or the disposal of dredged materials in the Estuary. Timing windows were designated as a means to protect and conserve important resources of the area. Timing windows are employed by the fisheries agencies as a means to minimize any potential impacts to important fish, wildlife and habitat resources. The time periods are primarily established to avoid impacts to the vulnerable life states of important fish species including migration, spawning and rearing. Portland District Army Corps projects are the only dredging projects on the West Coast that do not abide by timing windows.

Response: This is a factually inaccurate statement. The Corps developed timing restrictions to address specific resource issues, based on best available science, consultation with federal agencies to address species listed under the Endangered Species Act, and in response to comments from the Washington Department of Fish and Wildlife. These restrictions are tailored for specific areas and fish species based on the best available science and do not apply to all areas of the river (for example none were deemed applicable within Wahkiakum County). The project's timing restrictions are displayed below:

Dredging Timing

Construction Features	Type of Dredging	Timing
Rock removal with blasting	Mechanical excavation	November 1 to February 28
Berths	Mechanical excavation	November 1 to February 28
Ecosystem Restoration Features		
Lois Island Embayment Habitat Restoration	Pipeline	Pipeline dredging of material from the temp. construction sump will occur in the November to February in-water work window.
Purple Loosestrife Control Program		July 1 – Oct 31 (no dredging required; represents application timeframe)
Tenasillahe Island Interim Restoration ¹ (Tidegate/Inlet Improvements)	Mechanical excavation	July 1 – September 15
Tidegate Retrofits for Salmonid Passage	Mechanical excavation	July 1 – September 15
Walker/Lord and Hump/Fisher Islands Improved Embayment Circulation	Mechanical excavation	July 1 – September 15
Cottonwood/Howard Island Proposal ² Columbian White-Tailed Deer Introduction	Not Applicable	No timing window (no dredging required)
Tenasillahe Island Long-Term Restorations ³ (Dike Breach)	Mechanical excavation	July 1 – September 15
Bachelor Slough Restoration ⁴	Pipeline	July 1 – September 15

Shillapoo Lake Restoration ⁵	Mechanical excavation	July 1 – Sept 15 (in-water work only); balance of work behind flood control levees and thus no timing window
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Further, dredging and disposal activities are spatially and temporally limited, thus impacting a minimal area of the river, and principally the navigation channel, when in operation. It is unlikely that a dredging operation would encompass an entire drift. Project construction would occur at limited times in any one location over approximately 100 miles of the Columbia River and would be implemented by only a few dredge plants operating in discrete locations, thus minimizing the potential for commercial fisheries-dredging interactions. Operations and maintenance dredging would occur comparable to present actions relative to timing, dredging method and most disposal locations, and thus is unlikely to have a significant impact on the fishery. In Wahkiakum County, construction dredging is anticipated to take several months. The timing of the three gillnet fisheries, winter, spring and fall are variable and are set by the Columbia River Compact. These times are generally set with short advance notice and for short periods of time (days at a time), which often complicates the coordination with dredging operations. When conflicts do occur, the Corps and its contractor, the Port of Portland, work closely with the affected fishermen to minimize effects. Generally, only one drift is affected because the dredge is working in a fixed location. For example, during the summer dredging season in 2002, a gillnet fishing season was opened while the pipeline dredge Oregon was already performing maintenance dredging of the Federal navigation channel in the Brookfield/Welch Island Reach. A gillnet fisherman contacted the Corps and the dredge Oregon to express concern about having the floating pipeline from the dredge in his drift. The Port moved the pipeline to allow the fisherman to set his nets unimpeded by dredging equipment. This example illustrates how the Corps works with the fishermen to avoid and/or minimize problems. The construction of a deeper channel will not be much different than the dredging for the 40-foot maintenance program.

Conflicts between maintenance dredging operations and gillnet fisheries on the lower Columbia River have occurred for many years, but impacts have been minimal. The Corps of Engineers makes every effort to coordinate and work with gillnet fishermen to avoid and/or minimize effects to the fishery. Notification to mariners for maintenance dredging on the Columbia River is published weekly noting specific dredging locations and time periods.

4. *The effects of both initial and subsequent maintenance dredging, as well as dredging equipment marshalling and staging, shall be considered prior to approval of new projects or expansion of existing projects. Projects will not be approved unless disposal sites with adequate capacity to meet initial excavation dredging and at least five (5) years of expected maintenance dredging requirements are available.*

The project proposes the use of specific sites to accommodate the disposal needs which are not consistent with local regulations. Currently, despite project planning since 1989, there are not approved existing disposal sites with adequate capacity to meet the initial construction quantities and the volumes expected from 5 years of maintenance dredging.

Response: This statement misreads the policy. The policy does not state that there must be “approved existing disposal sites.” The policy states that there must be disposal sites with adequate capacity available.

7. *Where a dredged material disposal site is vegetated, disposal should occur on the smallest land area consistent with sound disposal methods (e.g., providing for adequate dewatering of dredged sediments, avoiding degradation of receiving*

waters). Clearing of land should occur in stages and only as needed. It may, however, be desirable to clear and fill an entire site at one time, if the site will be used for development immediately after dredged material disposal. Reuse of existing disposal sites is preferred to the creation of new sites provided that the dikes surrounding the site are adequate or can be made adequate to contain the dredged materials.

Existing shoreland beach nourishment sites exist and are preferable to the use of new, inconsistent in-water disposal sites. Clatsop County gives priority to the use of existing sites, especially those that provide the opportunity for beneficial use of the dredged material.

Response: The project uses a total of three NOAA Fisheries approved beach nourishment sites (e.g. Miller Sands Spit, Skamokawa, and Sand Island and St. Helens). The practice of beach nourishment has essentially been discontinued in the project area due to adverse environmental impacts to ESA fish and benthic invertebrates. The practice has also been demonstrated to be an inefficient means of dredged material disposal as sand typically readily erodes from the beach, migrates downslope back to the navigation channel and requires substantial redredging over time. Dredging can be reduced by sounder disposal practices, as identified in the FSIFR/EIS, which reduce the economic and environmental burdens associated with channel maintenance. The County does not identify which beach nourishment sites it believes have capacity and have not previously been screened from use for environmental or engineering reasons.

8. Disposal of dredged materials in intertidal areas shall only be allowed at designated beach nourishment sites or to provide fill material for an approved intertidal fill project.
9. When identifying land dredged material disposal sites, emphasis shall be placed on sites where (not in priority order):
 - (a) The local comprehensive plan land use designation is development provided that the disposal does not preclude future development at the site;
 - (b) The potential for the site's final use will benefit from deposition of dredged materials;
 - (c) Material may be stockpiled for future use;
 - (d) Dredged spoils containing organic, chemical, and/or other potentially toxic or polluted materials will be properly contained, presenting minimal health and environmental hazards due to leaching or other redistribution of contaminated materials;
 - (e) Placement of dredged material will help restore degraded habitat; or
 - (f) Wetlands would not be impacted.

where

Important fish and wildlife habitat, or areas with scenic, recreational, archaeological, or historical values that would not benefit from dredged material disposal and sites where the present intensity or type of use is inconsistent with dredged material disposal shall be avoided...

...The use of shoreland water dependent development sites for dredged material disposal shall occur only when the project sponsor can demonstrate that the dredged material placed on the site will be compatible with current or future water

dependent development. Dredged material disposal shall not occur in significant Goal 17 shorelands or wetlands habitats.

Engineering factors to be considered in site selection shall include: size and capacity of the site; dredging method; composition of the dredged materials; distance from dredging operation; control of drainage from the site; elevation; and the costs of site acquisition, preparation and revegetation.

10. *Estuarine in-water disposal sites shall be in areas identified as low in benthic productivity, unless the disposal is to provide fill material for an approved fill project, and where disposal at the site will not have adverse hydraulic effects. Estuarine in-water disposal sites shall only be designated and used when it is demonstrated that no feasible land or ocean disposal sites can be identified and biological and physical impacts are minimal. An in-water disposal site shall not be used if sufficient sediment type and benthic data are not available to characterize the site.*

The Lois/Mott and Miller/Pillar proposed “ecosystem restoration” features are not designated estuarine in-water disposal sites. The site characterization for both of these sites is insufficient.

Response: This statement again seeks to apply a policy intended for dredge material disposal sites to an enhancement/restoration project. The State should not accept this interpretation. To do so would make it very difficult if not impossible to return excavated areas or other artificially deepened areas of the estuary to a depth that restores functions and values of the estuary. Under the County’s interpretation no sand would be available to restore bathymetry because it would all be taken to the ocean or upland. Accepting this interpretation also creates a direct conflict with Washington State’s objective of keeping sand in the river, rather than removing it to the ocean.

The above sentence also misreads the standard. The standard does not require use of “designated” sites. Rather, the standard says that sites should not be designated and used when there are other options. As discussed above, there are no options for beach nourishment or upland disposal in this stretch of the estuary.

Sufficient site characterization information for Lois Island and Miller-Pillar is contained in sections 8.2.1 and 8.2.3 of the Biological Assessment.

The sediment type at Lois/Mott Island presented in the SEIS and §401 certification application is incorrect (the Corps asserts Lois/Mott sediments as primarily medium-coarse grained sand, the CREDDP Atlas shows the sediment as being “very fine sand, silt and clay”).

Response: The sediment type at Lois Island embayment is very fine material. Sediment samples taken associated with the Tongue Point Monitoring Program 1989-1992 provide confirmation of sediment characteristics in the Lois Island embayment.

In addition to the insufficient physical site characterization, current fish use and benthic information has not been characterized.

See above excerpts from the BA, which characterize fish use and benthic information.

11. *Flow lane disposal sites shall only be allowed in development designated areas within or adjacent to a channel where:*
- (a) Sediments can reasonably be expected to be transported down-stream without excessive shoaling,*
 - (b) Interference with recreational and commercial fishing operations, including snag removal from gillnet drifts, will be minimal or can be minimized by applying specific timing restrictions,*
 - (c) Adverse hydraulic effects will be minimal,*
 - (d) Adverse effects on estuarine resources will be minimal, and*
 - (e) The disposal site depth is between 20 and 65 feet below MLLW.*

The Corps is proposing to dispose of material in depths greater than 65 feet downstream from river mile 5 and at various locations between river miles 29 and 40. This is inconsistent with local regulations.

Response: All construction material from RM 29-38 will be on the Washington side of the side of the river. Clatsop County's plan does not apply to these sites. The site at RM 5 is for maintenance and the Corps has indicated that it would apply for an exception to use this site.

The Miller/Pillar and Lois/Mott dumpsites would effectively eliminate two commercial fishing grounds, as well as preclude recreational fishing opportunities at those two sites. Disposal at these sites will adversely affect estuarine resources.

Response: This statement applies a policy for flow lane disposal to enhancement/restoration projects. The policy is not applicable. See responses to P20.5 (3 & 5). The contention that recreational and commercial fisheries would be eliminated is a gross overstatement. Approximately 19% of the Tongue Point SAF acreage would be precluded from use by commercial fishermen. Approximately 14% of the Miller Sands Gill Net Drift would be precluded from use by commercial fishermen with implementation of the Miller-Pillar ecosystem restoration feature. Obviously, commercial fishing would not be eliminated as stated in the Clatsop County comments.

Recreational fishing, principally for spring Chinook, does occur in the area of the Miller-Pillar ecosystem restoration feature. Ample opportunity exists for recreational spring Chinook fishermen to shift either upstream or downstream to continue their recreational pursuit. The popular sport fishing location for sturgeon is outside the Lois Island embayment, lying upstream of Tongue Point and channelward of Mott Island. The temporary sump for Lois Island embayment is channelward of the popular Tongue Point recreational sturgeon fishing area. Recreational fishing in Lois Island embayment is extremely limited in extent with the bulk of the sturgeon fishing occurring channelward of Mott Island and upstream of Tongue Point.

ESA-listed salmonid habitat will be eliminated. In their comments to the Corps on the SEIS, the Oregon Department of Fish and Wildlife (ODFW) in their discussion of the Lois/Mott stated: *The proposed restoration site is also a rearing area for sturgeon and a popular sport fishing location for sturgeon*

Response: This flow lane policy is not applicable. In addition, the NOAA Fisheries Service and U.S. Fish and Wildlife Service concluded that these projects would result in a net beneficial effect on listed species. The proposed restoration action at Lois Island embayment will not "eliminate" ESA salmonid habitat. The habitat restoration action will temporarily reduce salmonid use of the area during construction and while tidal marsh vegetation pioneers onto the location and becomes established. Subsequent to the initial construction and plant establishment period, the tidal marsh habitat will become a valuable habitat for juvenile salmonids and sturgeon, whether through direct

use or attainment of benefit from the primary productivity exported annually from the tidal marsh to the estuary.

A pile dike, by definition, is a partial barrier to water flow designed to direct flow in a particular direction. Hydraulic effects for pile dike construction at the Miller/Pillar site are unknown.

Response: The flow lane policy regarding water flow does not apply to enhancement/restoration and does not, in any case, apply to Lois Mott or Miller-Pillar.

The ODFW also expressed concern about the Miller/Pillar site. They are concerned about the hydraulic impacts to the area as a result of the dredged material disposal between the pile dikes. ODFW's comments on the SEIS states:

There is a biological value in the current water exchange between Jim Crow Sands and Miller Sands. There are two tongues of water that go around Jim Crow Sands. The proposed dredged material disposal would substantially reduce this flow. If the water flow is eliminated between Miller Sands and Jim Crow Sands, ODFW is concerned that the Oregon side of the channel will fill in.

Response: The flow lane policy regarding water flow does not apply to enhancement/restoration. In addition, ODFW's concern was based on a misunderstanding that Miller/Pillar would fill in the area between the two islands and preclude the flow. The Final SEIS explains why ODFW's concern is factually incorrect. The Corps has evaluated the hydraulic conditions at Miller-Pillar and determined that there were no significant effects associated with the emplacement of pile dikes there. The principal flow into lower Cathlamet Bay comes through Woody Island channel. The natural riverbed elevations at Miller-Pillar (~6 feet) would tend to limit flow through the restoration area. ODFW's concern about channel infill (no specific channel identified) is speculative at best and not based upon hydraulic modeling.

The project does not include the use of timing windows in the Estuary as a means to protect and conserve important resources of the area. Timing windows are employed by the fisheries agencies as a means to minimize any potential impacts to important fish, wildlife and habitat resources. The time periods are primarily established to avoid impacts to the vulnerable life states of important fish species including migration, spawning and rearing. Portland District Army Corps projects are the only dredging projects on the West Coast that do not abide by timing windows.

Response: This statement is factually inaccurate, as explained above. Timing windows are included for the proposed action (see table above). In addition, the County's statement is stated under a policy that does not mention timing windows in any way, much less require such windows.

12. *Beach nourishment sites shall only be designated on sandy beaches currently experiencing active erosion. Dredged material disposal at beach nourishment sites shall only be used to offset the erosion and not to create new beach or land areas. Beach nourishment sites shall not be designated in areas where placement or subsequent erosion of the dredged materials would adversely impact tidal marshes or productive intertidal or shallow subtidal areas. Designation of new beach nourishment sites shall require an exception to Statewide Planning Goal 16.*

13. *Dredged material disposal sites with adequate capacity to accommodate anticipated dredging needs for at least a five-year period shall be identified and designated. Additional sites may also be designated. All dredged material disposal sites shall receive a Priority I or II designation with respect to its suitability and importance for meeting five-year dredging needs.*

The project proposes the use of specific sites to accommodate the disposal needs which are not consistent with local regulations. Currently, despite EIS processes and a dozen years of planning there are not approved existing disposal sites with adequate capacity to meet the initial construction quantities and the volumes expected from 5 years of maintenance dredging.

Response: As discussed above, Lois Island embayment and Miller/Pillar are enhancement/restoration projects, not disposal sites. Policy 13, however, does not state that disposal must occur in sites that have already been designated. Rather, the policy states that an applicant must identify and designate sites with capacity for 5 years.

P20.6 - Estuarine Construction: Piling And Dolphin Installation, Shoreline Stabilization And Navigational Structures

The policies in this subsection apply to over-the-water and in-water structures such as ... pile dikes, ... and other structures involving installation of piling ... in Columbia River Estuary aquatic areas. Also covered under these policies are shoreline stabilization and aquatic area fills.

2. *Navigational structures, such as breakwaters, jetties, groins, and pile dikes are major estuarine alterations with long term biological and physical effects. Proposals for new or enlarged navigational structures, or for removal of existing structures, must demonstrate that expected benefits outweigh potential adverse impacts on estuarine productivity.*

The construction of the pile dike field between Miller Sands and Pillar Rock Islands to create 234 acres of shallow water and flats habitat is a major alteration to the estuarine environment and will have both long-term biological and physical effects. The impacts from this project are poorly understood and are not presented in the SEIS or any of the supporting documents. ODFW has expressed concerns about the potential adverse hydraulic impacts as a result of the construction of this feature. The uncertainty surrounding both the benefits and the impacts at this site do not meet the requirement that the proposal “*must demonstrate that expected benefits outweigh potential adverse impacts on estuarine productivity.*”

Response: The referenced policy applies to “navigation structures.” The dikes are not navigation structures. The Miller/Pillar pile dike, as the County’s comment acknowledges, would create habitat. The policy does not apply to such enhancement/restoration projects. It is inaccurate to say that the impacts are not presented in the SEIS or supporting documents. The SEIS, Biological Opinion and Biological Assessments all conclude that the project should have a long-term beneficial impact. See also responses above pertaining to ODFW’s concerns.

3. *New uses in aquatic areas and in shoreland areas especially suited for water-dependent development that are not water-dependent, if permitted, shall not preclude or pose any significant conflicts with existing, proposed or probable future water-dependent uses on the site or in the vicinity.*

The area directly adjacent to the proposed Lois/Mott dumpsite is zoned Aquatic Development and Water-Dependent Development Shorelands. Tongue Point is a marine industrial area. There are existing piers in the area. The Lois/Mott Island Embayment has been used as a turning basin for vessels that dock at this site. Filling up of the area has the potential to include any proposed or probable future water-dependent uses in the vicinity. Future economic development in Clatsop County could be negatively impacted with the implementation of the Lois/Mott dumpsite.

Response: This policy applies to “new uses in aquatic areas . . . that are not water-dependent”. Creation of marsh habitat in this location is obviously a water dependent activity. Therefore, this policy is inapplicable. This conclusion would be true even if the site was being used for disposal.

This comment assumes that the embayment will be entirely filled. The project presented in the CZMA application reduces the fill in the embayment significantly. The State should also carefully consider whether it wants to endorse an interpretation that precludes restoration of 192 acres of marsh habitat with its anticipated benefits to salmonids listed under the Endangered Species Act.

The Tongue Point Navigation Channel contains a turning basin adequate to serve deep draft vessels at its upstream terminus. Lois Island embayment could not serve as a turning basin for deep draft vessels without further dredging. Shallow draft vessels have no need to turn in Lois Island embayment. The embayment is not now nor would it be used in the future as a turning basin without substantial environmental review. The likelihood of economic development in the embayment given the level of environmental concern is minute. Clatsop County and the State of Oregon have yet to demonstrate their capability to bring deep draft vessel usage to Tongue Point even though a channel has been dredged for them to Tongue Point.

P20.7 - Filling Of Aquatic Areas And Wetlands

This subsection applies to the placement of fill material in the tidal wetlands and waters of the Columbia River Estuary.

1. *New uses in aquatic areas and in shoreland areas especially suited for water-dependent development that are not water-dependent, if permitted, shall not preclude or pose any significant conflicts with existing, proposed or probable future water-dependent uses on the site or in the vicinity.*

The area directly adjacent to the proposed Lois/Mott dumpsite is zoned Aquatic Development and Water-Dependent Development Shorelands. Tongue Point is a marine industrial area. There are existing piers in the area. The Lois/Mott Island Embayment has been used as a turning basin for vessels that dock at this site. Filling up of the area has the potential to include any proposed or probable future water-dependent uses in the vicinity.

The CEDC Net Pen Terminal fishery is located at Tongue Point. The in-water disposal site proposed for the Lois/Mott Island embayment would conflict with an existing water-dependent use because the use of the embayment as a dumpsite would necessarily preclude the use of the embayment as a fishing area.

Response: This policy applies to “new uses in aquatic areas . . . that are not water-dependent”. Creation of marsh habitat in this location is obviously a water dependent activity. Therefore, this policy is inapplicable. This conclusion would be true even if the site was being used for disposal.

This comment assumes that the embayment will be entirely filled. The project presented in the CZMA application reduces the fill in the embayment significantly. The State should also carefully consider whether it wants to endorse an interpretation that precludes restoration of 191 acres of marsh habitat with its anticipated benefits to salmonids listed under the Endangered Species Act.

Regarding impacts to the SAF, refer to response to P20.2: 3 & 5

2. *Reduction of surface area and volume of aquatic areas and significant non-tidal wetlands in shoreland areas shall be minimized in the location and design of uses or activities requiring fill.*

P20.8 - Fish And Wildlife Habitat

This subsection applies to uses and activities with potential adverse impacts on fish or wildlife habitat, both in Columbia River estuarine aquatic areas and in estuarine shorelands.

1. *Endangered or threatened species habitat shall be protected from incompatible development.*

The proposed “ecosystem restoration” components at Lois/Mott and Miller/Pillar will clearly be removing critical habitat used by adult ESA-listed fish species from the estuarine environment.

Response: This is a truly remarkable conclusion that unfortunately puts into question the County’s overall credibility. Lois/Mott and Miller/Pillar are not to be removed from the estuary. To the contrary, the function and value of these areas for listed species is being enhanced. The NOAA Fisheries Service and the U.S. Fish and Wildlife Service, the agencies responsible for implementing the ESA, reached this conclusion in the Biological Opinions. The proposed habitat restoration features do not constitute “incompatible development” for endangered or threatened species.

3. *Major marshes, significant wildlife habitat, coastal headlands, and exceptional aesthetic resources in the Coastal Shorelands Boundary shall be protected.*

P20.12 - Mitigation And Restoration

Policies in this section are applicable to estuarine restoration and mitigation projects on Columbia River Estuary aquatic areas and shorelands. Non-tidal wetlands are briefly addressed.

Mitigation

1. *Any fill activities that are permitted in the Columbia River Estuary aquatic areas or dredging activities in intertidal and shallow to medium depth subtidal areas shall be mitigated through project design and/or compensatory mitigation (creation,*

restoration or enhancement) to ensure that the integrity of the estuary ecosystem is maintained. ...

2. *Mitigation for fill in estuarine aquatic areas or dredging in intertidal and shallow to medium depth subtidal areas of the Columbia River Estuary planning area shall be implemented through the following mitigation actions:*

Mitigation is required for the estuarine fills proposed at Lois/Mott and Miller/Pillar, including pile dike construction.

Response: The State should carefully consider an interpretation that requires a proponent of a enhancement/restoration project to mitigate for the impacts of restoring functions and values. The design of the two restoration features is intended to enhance site values for fish and wildlife resources over and above their existing values through development of tidal marsh habitat. Thus the proposals meet the "project design" criteria to ensure that the integrity of the estuary ecosystem is maintained.

5. All mitigation actions shall be required to begin prior to or concurrent with the associated development action.

None of the required mitigation actions are proposed.

Response: Wildlife mitigation actions will occur prior to or concurrent with the associated development. The Lois Island embayment and Miller-Pillar ecosystem restoration features by design represent an enhancement to the estuarine environment and therefore does not require a mitigation action.

Restoration

29. *All restoration projects shall serve to revitalize, return, replace or otherwise improve the wetland and aquatic ecosystems in the Columbia River Estuary area. Examples include restoration of natural biological productivity, fish and wildlife habitat, aesthetic or historic resources that have been diminished or lost due to past alterations, activities, or catastrophic events. In selecting projects, priority shall be given to those projects which provide substantial public benefits and which restore those wetland and aquatic habitat types, resources, or amenities which are in shortest supply compared to past abundance.*

The dredged material disposal sites characterized as "restoration" projects (Miller/Pillar, Lois/Mott) by the Corps are dredged material disposal sites and will not improve the aquatic ecosystems in the Columbia River Estuary. CREST, ODFW and the LCREP Science Work Group all commented to the relative low priority of these "restoration" projects.

The proposed actions will are not restore historic habitat types that have been the most severely impacted in the estuary. Data presented in *Changes in Columbia River Estuary Habitat Types Over the Past Century* (Duncan Thomas, CREST 1983) show that shallow water and flats have actually increased by over 10% where every other estuarine habitat type has experienced a loss, except shallow water and flats.

Response: These statements do not reflect the changes that the Corps made to these features in response to comments received from ODFW and LCREP on the

draft Supplemental Environmental Impact Statement. Specifically, the Corps reduced the footprint of the Lois Mott project to 191 acres and increase its elevation to approximately +6.6 feet MLLW in order to develop tidal marsh habitat, a focal point for restoration efforts. Tidal marsh has been identified by numerous parties as a priority estuarine habitat for restoration. The Corps changed the initial habitat restoration proposal at Lois Island embayment to reflect public comments to the DSEIS.

Historically, Lois and Mott Islands were dredge spoil islands. True restoration for these sites would be to remove the existing dredge material, not to add additional dredge material. Thus, it is not appropriate or accurate to call filling of the existing embayment restoration.

Response: The goal of restoration is to restore historic habitat functions and values, not to restore predevelopment features at the entire Lois Island embayment location. The County simply cannot be serious in implying that restoring 191 acres of scarce marsh habitat to the estuary is of no value just because the Corps is not removing Lois and Mott Islands. Lois Island embayment was created by dredging as were Lois and Mott Islands. These two islands currently provide important tidal marsh and riparian forest habitat for estuarine fish and wildlife resources. Their removal would be counterproductive now to these fish and wildlife resources. Restoration of 191 acres of tidal marsh habitat adjacent to these islands would greatly complement their present value for fish and wildlife resources in the estuary.

CLATSOP COUNTY LAND AND WATER DEVELOPMENT AND USE ORDINANCE

Section 3.740. Aquatic Development Zone (AD).

The standards of this section are applicable to all activities occurring within the navigation channel.

Section 3.760. Aquatic Conservation Two Zone (AC-2).

Dredged material disposal, as proposed at Miller/Pillar and Lois/Mott, is not a permitted use within the AC-2 zone.

Response: The AC-2 zone permits Estuarine Enhancement and related fills. Lois Island embayment and Miller Pillar meet the definition of Estuarine Enhancement.

COLUMBIA RIVER ESTUARY SHORELAND AND AQUATIC USE AND ACTIVITY STANDARDS

Standards in this section are applicable to developments in Columbia River Estuary shorelands and aquatic areas.

S4.200. Purpose. Columbia River Estuary shoreland and aquatic area standards are requirements which apply to development uses and activities proposed in one or more of the following management designations: Marine Industrial Shorelands Zone (MI); Conservation Shorelands Zone (CS); Natural Shorelands Zone (NS); Aquatic Development Zone (AD); Aquatic Conservation Two Zone (AC-2); Aquatic Conservation One Zone (AC-1); Aquatic Natural Zone (AN); and those areas included in the Shorelands Overlay District (/SO). These standards are intended to protect the unique economic, social, and environmental values of the Columbia River Estuary.

S4.202. General Standard. Proposed uses and activities in the Columbia River Estuary shoreland and aquatic areas may only be approved when it is determined that such uses or activities are consistent with the purposes of the Columbia River Estuary management areas in which they are proposed and satisfy all applicable Comprehensive Plan policies and Columbia River Estuary Shoreland and Aquatic Activity and Use Standards. In addition, some uses and activities in the Columbia River Estuary, which could potentially alter the estuarine ecosystem, are also subject to an Impact Assessment and Resource Capability Determination.

S4.206. Aquaculture and Fisheries. The standards in this subsection apply to all projects that could affect commercial or recreational fisheries or aquaculture in the Columbia River Estuary. This section is also applicable to the development of aquaculture facilities and to fisheries enhancement projects.

5. *In-water construction activity in aquatic areas shall follow the recommendations of state and federal fisheries agencies with respect to project timing to avoid unnecessary impacts on migratory fish.*

The project does not include the use of timing windows for dredging or flow-lane disposal in the Estuary. Disposal into the proposed sump for the Lois/Mott Island embayment dumpsite will occur prior to the designated in-water work period for the Columbia River Estuary.

Response: See table regarding timing windows for dredging actions.

6. *Commercial fish drifts shall be protected from conflicting in-water activity, including dredging, in-water dredged material disposal, and aquatic area mining and mineral extraction, by coordinating review of such activity with fishery regulatory agencies, fishing organizations, drift captains and drift right owners, and other interested parties.*

Commercial fish drifts are not protect from conflicting in-water activity by the Channel Deepening project. The Miller/Pillar dumpsite directly conflicts with a historic gillnet drift by disposing of dredged material to create approximately 230 acres of shallow water habitat. The proposal for this activity was not coordinated with fishing organizations, state fishery agencies, drift captains, drift right owners, or other interested parties.

Response: See earlier response regarding same issue. The DSEIS and FSEIS brought this issue before the public and the affected drift fishermen.

7. *Prior to approval of in-water activities with the potential for affecting commercial fishing activities, the project sponsor shall notify local drift captains, the Columbia River Fisherman's Protective Union and the Northwest Gillnetters Association and the state fishery agency.*

No coordination has occurred.

Response: The DSEIS and FSEIS brought this issue before the public and the affected drift fishermen.

S4.208. Estuarine Construction: Piling and Dolphin Installation, Shoreline Stabilization, and Navigational Structures.

This standard applies and is required.

S4.209. Deep-Water Navigation, Port and Industrial Development.

This standard applies and is required.

S4.218. Mitigation and Restoration.

This standard applies and is required.

Impacts to natural resources will occur from entrainment, in-water disposal of dredged material, lack of timing windows for the protection and avoidance of migratory salmon, direct impacts to 15 square miles of ocean disposal sites for the next 50 years (impacting Dungeness crab and groundfish habitat), disruption and alteration of the estuarine food web, accelerated degradation of shoreline habitat, cumulative effects from continued dredging and disposal, and secondary impacts to areas outside of the main navigation channel.

Response: The Project includes mitigation and restoration. The Project includes appropriate timing windows as discussed above. The Clatsop County plan does not apply to the ocean disposal site. The ocean disposal site, however, was selected to avoid, reduce and minimize impacts as discussed in the 1999 FEIS and the FSEIS. Extensive modeling and evaluation indicates that the Project should not affect the physical parameters of the river in a manner that would disrupt the food web. The Project includes restoration features that will reverse the historic trend of degradation by restoring tidal marsh habitat.

S4.232. Dredging and Dredged Material Disposal. Standards in this subsection are applicable to all Columbia River Estuary estuarine dredging operations and to both estuarine shoreland and aquatic dredged material disposal.

1. *Dredging in estuarine aquatic areas, subject to dredging and dredged material disposal policies and standards, shall be allowed only:*
 - a. *If specifically allowed by the applicable aquatic zone and required for one or more of the following uses and activities:*
 1. *Navigation or navigational access;*
 - b. *If a need (i.e. a substantial public benefit) is demonstrated; and*
 - c. *If the use or alteration does not unreasonably interfere with public trust rights; and*
 - d. *If no feasible alternative upland locations exist; and*
 - e. *If adverse impacts, as identified in the impact assessments, are minimized.*
2. *When dredging is permitted, the dredging shall be the minimum necessary to accomplish the proposed use.*
3. *Undesirable erosion, sedimentation, increased flood hazard, and other changes in circulation shall be avoided at the dredging and disposal site and in adjacent areas.*

The proposal includes over-width dredging along the navigation channel. The areas for over-width dredging are not identified in either the EIS or the SEIS and may occur in Clatsop County. One hundred (100) feet dredging on either side of the 600-foot wide navigation channel is proposed although exact locations and volumes of over-width dredging and sediment quality are not presented. Over-width dredging has the potential to destabilize fine-textured sediments, resuspend contaminants, impact erosion and siltation in areas adjacent to the dredging project and could cause other undesirable changes in circulation patterns. Furthermore, without identifying the locations of planned over-width dredging it is difficult to determine when reviewing the proposal if it meets the requirement that dredging be “the minimum necessary to accomplish the proposed use.”

Response: The Final SEIS reports those locations where over-width dredging occurs today with the 40-foot maintenance. Sediments in these locations have been tested during various studies, primarily for benthic infauna assessments but which also included grain size analyses. The Corps is not aware of any “fine-textured” sediment in these areas that may harbor unknown contamination. The specific overwidth locations were provided in our response to CREST’s draft SEIS comments (Final Supplemental Integrated Feasibility Report & Environmental Impact Statement, Vol. 4, p.SSI-180). The locations within Wahkiakum County are: 21+25-23+10, 28+20-33+30, 34+40-36+00, 41+50-42+30, and 45+00-48+00. The overwidth is generally 100 ft to one side of the channel, but there are short stretches at 22+10-22+20, 41+20-41+50, and 58+10-59+00 where overwidth dredging would be done on

both sides of the channel. Overwidth dredging is now, or has been, done on the 40-ft channel at these same locations that are being proposed for the 43-ft channel.

Channel side slope adjustment and channel sloughing is likely to occur as a result of the deeper channel. The Exhibit J of the SEIS *Columbia River 43-foot Channel Deepening Sedimentation Impacts Analysis* (page 8) indicates that the side slope adjustments “may extend to the shoreline around RM’s 22, 42-46 ... the sandy beaches may experience 10-50 ft of lateral erosion”. Shorelines in these areas are already experiencing active erosion. These side slope adjustment areas have not been characterized for chemicals of concern.

Response: Side slope erosion occurs in areas actively moving sandy channel materials. These dredged materials are low in organic material and contaminants. Sediments in the proposed project area have been tested following the procedures in the Dredged Material Evaluation Framework, to which Oregon DEQ is a signatory agency. The sampling conducted during the feasibility study occurred before the publishing of the DMEF. However, the inter-agency charged with producing the DMEF, did review and participate in the sampling plan we conducted and it was done in accordance with the manual the group was producing. No finding of suitability was signed, due to the timing of the document. Over 100 separate sediment studies have been conducted in the last 22 years in the Columbia River for various purposes. Over 4,000 sediment samples from the Columbia River have been collected and evaluated. The Bi-State studies conducted in the early 1990s included the evaluation of fine-grained sediment from backwater areas in the Columbia River. This study did not find significant levels of contamination in the side slope and backwater areas outside of the federal navigation channel. Bioassays were performed on these sediment samples collected during the Bi-State study. Based upon the large body of Columbia River sediment information, no further testing of channel sediments is considered necessary. The one exception is the Astoria turning basin if dredged.

Diversion of flow from shallow areas into the main channel by dredging or pile dikes to the degree that circulation is markedly decreased and sedimentation is increased in shallow areas resulting in over-channelization. This siltation of side channels outside the navigation channel is a concern. Changes in circulation and the resulting changes to areas in the estuary outside the navigation channel remain poorly understood.

4. *The timing of dredging and dredged material disposal operations shall be coordinated with state and federal resource agencies, local governments, and private interests to protect estuarine aquatic and shoreland resources, minimize interference with commercial and recreational fishing, including snag removal from development drifts, and insure proper flushing of sediment and other materials introduced into the water by the project.*

The project does not include the use of timing windows for dredging or flow-lane disposal in the Estuary. Disposal into the proposed sump for the Lois/Mott Island embayment dumpsite will occur prior to the designated in-water work period for the Columbia River Estuary.

Response: See response to policy 3 of P20.5 - Dredging and Dredged Material Disposal.

5. *Bottom sediments in the dredging area shall be characterized by the applicant in accordance with U.S. Environmental Protection Agency, and Oregon Department of Environmental Quality standards. Information that may be required includes, but is not limited to, sediment grain size distribution, organic content, oil and grease, selected heavy metals, pesticides and other organic compounds, and benthic biological studies.*

Bottom sediments in the Columbia River Navigation Channel are primarily coarse-grained sand and generally contain low levels of contaminants. However, only 23 grab samples were analyzed for 115 miles of river (including the Willamette). The *Dredged Material Evaluation Framework* (DMEF) requires core samples to be taken to the design depth for the project. In this case, the design depth is 48 feet (including the 5 feet advance maintenance dredging). The sediment samples were not taken at the design depth, and the number of samples is insufficient to adequately characterize the dredging prism for the deepening project. Additional impacts from channel sloughing, side slope adjustments, and over width dredging (100 feet dredging on either side of the navigation channel is proposed although exact locations and volumes of over width dredging and sediment quality are not presented).

Combined, the Oregon and Washington 1998 303(d) list of water quality-limited streams lists the Columbia River and the project area as exceeding the water quality criteria for the following parameters: Arsenic, DDE, Dissolved Oxygen, Fecal Coliform, PCB, Temperature, Total Dissolved Gas, Bis(2-ethylhexyl), Phthalate, Dieldrin, and Sediment Bioassay. The Draft Oregon 2002 303(d) list adds the following parameter as exceeding the water quality criteria in the project area: Polynuclear Aromatic Hydrocarbons (PAHs) and Chlordane.

Of the 23 samples included in the FEIS several exceeded criteria set forth by NOAA Fisheries for DDT levels for similar dredging projects in the Columbia River Estuary. Low level PAH's and PCB's are also a concern for local dredging projects.

Response: Sediments in the main stem of the Columbia River were collected and analyzed prior to the completion of the 1998 DMEF. However, the Channel Improvements Project Sampling and Analysis Plan (SAP) was reviewed and discussed by the inter-agency workgroup charged with producing the DMEF of which ODEQ was a signatory agency. Sampling and testing was conducted in exceedence of the requirements of the DMEF. The SAP, analytical results, and discussion are presented in Appendix B of the FEIS, 1999. In addition, sediment quality data was reviewed by an expert panel facilitated by Sustainable Ecosystems Institute (SEI). Their conclusions were that the sediment characterization as presented in the FEIS was adequate and that toxics were not an issue in the main stem, Columbia River navigation channel. Subsequently, the Corps has identified over 100 separate sediment studies that have been conducted in the last 22 years in the Columbia River for various purposes. Over 4,000 sediment samples have been collected and analyzed. In addition, independent studies such as the Bi-State Feasibility and Backwater studies have been conducted. These studies did not find significant levels of contamination in the side slope and backwater areas outside of the federal navigation channel. Bioassays were performed on sediment samples collected during the Bi-State study. Based upon the large body of Columbia River sediment information, no further testing of channel sediments is considered necessary. The one exception is the Astoria turning basin if dredged. NOAA fisheries, specifically the Northwest Fisheries Science Center, while establishing threshold concentrations for some chemicals, has not established criteria nor set forth threshold concentrations for DDT. In their review of the proposed project the NOAA Northwest Fisheries Science Center accepted the screening level established for total DDT in the DMEF. Further PAH and PCB when found did not come near the DMEF screening levels or NOAA Fisheries threshold concentrations.

The types of sediment tests required will depend on dredging and disposal techniques, sediment grain size, available data on the sediments at the dredging site, and proximity to contaminant sources. Generally, projects involving in-water disposal of fine sediments will require a higher level of sediment testing than projects involving disposal of coarse sediments. Projects involving upland disposal may be exempted from the testing requirement, depending on the nature of the sediments and the amount of existing sediment data available.

Unavailable burdens on the permit applicant shall be minimized by considering the economic cost of performing the sediment evaluation, the utility of the data to be provided, and the nature and magnitude of any potential environmental effect.

6. *Adverse short-term effects of dredging and aquatic area disposal such as increased turbidity, release of organic and inorganic materials or toxic substances, depletion of dissolved oxygen, disruption of the food chain, loss of benthic productivity, and disturbance of fish runs and important localized biological communities shall be minimized.*

Short-term impacts to turbidity will occur during dredging and disposal.

Response: The SEIS, Biological Opinion, and BA all outline the best management practices that will be used to minimize the adverse effects of turbidity.

7. *Impacts on areas adjacent to the dredging site such as destabilization of fine textured sediments, erosion, siltation and other undesirable changes in circulation patterns shall be minimized.*

One hundred (100) feet dredging on either side of the 600-foot wide navigation channel is proposed for over-width dredging, although exact locations and volumes and sediment quality are not presented. Over-width dredging has the potential to destabilize fine-textured sediments, resuspend contaminants, impact erosion and siltation in areas adjacent to the dredging project and could cause other undesirable changes in circulation patterns.

Response: See response to S4.232. Dredging and Dredged Material Disposal.

8. *The effects of both initial and subsequent maintenance dredging, as well as dredging equipment marshaling and staging, shall be considered prior to approval of new projects or expansion of existing projects. Projects will not be approved unless disposal sites with adequate capacity to meet initial excavation dredging and at least five years of expected maintenance dredging requirements are available.*

Dredged Material Disposal Standards

13. *Dredged material disposal shall occur only at designated sites or at new sites that meet the requirements of the Dredged Material Disposal Site Selection Policies.*

The SEIS proposes to dispose of material at sites which are not designated in the local Dredged Material Management Plan and which do not meet the requirements of the site selection policies. These sites are:

- Flow-lane disposal at depths greater than 65'
- Sump disposal associated with the Lois/Mott Island Embayment dumpsite
- Estuarine in-water disposal at both Lois/Mott and Miller/Pillar

Response: As earlier noted, the Corps will seek and exemption for flow lane disposal at RM 5. Use of the sump and creation of the Lois/Mott and Miller/Pillar feature are not disposal; however, these sites meet the requirements of the Dredged Material Disposal Site Selection Policies.

14. *Proposals for in-water disposal of dredged materials, including flowlane disposal, beach nourishment, estuarine open-water disposal, ocean disposal, and agitation dredging, shall:*

- a. *Demonstrate the need for the proposed action and that there are no feasible alternative disposal sites or methods that entail less damaging environmental impacts; and*
- b. *Demonstrate that the dredged sediments meet state and federal sediment testing requirements and water quality standards (see Dredging Standard 5); and*

Bottom sediments in the Columbia River Navigation Channel are primarily coarse-grained sand and generally contain low levels of contaminants. However, only 23 grab samples were analyzed for 115 miles of river (including the Willamette). The *Dredged Material Evaluation Framework* (DMEF) requires core samples to be taken to the design depth for the project. In this case, the design depth is 48 feet (including the 5 feet advance maintenance dredging). The sediment samples were not taken at the design depth, and the number of samples is insufficient to adequately characterize the dredging prism for the deepening project. Additional impacts from channel sloughing, side slope adjustments, and over width dredging (100 feet dredging on either side of the navigation channel is proposed although exact locations and volumes of over width dredging and sediment quality are not presented).

Combined, the Oregon and Washington 1998 303(d) list of water quality-limited streams lists the Columbia River and the project area as exceeding the water quality criteria for the following parameters: Arsenic, DDE, Dissolved Oxygen, Fecal Coliform, PCB, Temperature, Total Dissolved Gas, Bis(2-ethylhexyl), Phthalate, Dieldrin, and Sediment Bioassay. The Draft Oregon 2002 303(d) list adds the following parameter as exceeding the water quality criteria in the project area: Polynuclear Aromatic Hydrocarbons (PAHs) and Chlordane.

Of the 23 samples included in the FEIS several exceeded criteria set forth by NOAA Fisheries for DDT levels for similar dredging projects in the Columbia River Estuary.

Response: See response to standard 5 of S4.232. Dredging and Dredged Material Disposal.

15. *Proposals for in-water estuary disposal shall be coordinated with commercial fishing interests, including, but not limited to: development drift captains at the dredging and disposal site, the Columbia River Fisherman's Protective Union, Northwest Gillnetters Association, and the State fishery agencies. In-water disposal actions shall avoid development drifts whenever feasible. When it is not feasible to avoid development drifts, impacts shall be minimized in coordination with fisheries interests through:*
 - a. *Disposal timing,*
 - b. *Gear placement,*
 - c. *Choice of disposal area within the drift, and*
 - d. *Disposal techniques to avoid snag placement.*

The proposal for the Miller/Pillar "restoration" activity was not coordinated with fishing organizations, state fishery agencies, drift captains, drift right owners, or other interested parties. Impacts were not attempted to be minimized through coordination with affected fishing interests.

Response: The DSEIS and FSEIS brought this issue before the public and the affected drift fishermen.

16-22 These standards deal with flowlane disposal, ocean disposal and upland disposal and also apply.

S4.235. Filling of Aquatic Areas and Non-Tidal Wetlands. This subsection applies to the placement of fill material in tidal wetlands and waters of the Columbia River Estuary. These standards also apply to fill in non-

tidal wetlands in shoreland designations that are identified as "significant" wetlands under Statewide Planning Goal 17.

1. *Fill in estuarine aquatic areas may be permitted only if all of the following criteria are met:*
 - a. *If required for navigation or for other water-dependent uses requiring an estuarine location, or if specifically allowed under the applicable aquatic zone; and*
 - b. *If a need (i.e. a substantial public benefit) is demonstrated; and*
 - c. *The proposed fill does not unreasonably interfere with public trust rights; and*
 - d. *Feasible alternative upland locations do not exist; and*
 - e. *Adverse impacts, as identified in the impact assessment, are minimized.*

The public trust doctrine provides that the State of Oregon holds submerged and submersible land in trust for the benefit of all the people. The general public has a right to fully enjoy these resources for a wide variety of public uses including navigation, commerce, recreation, and fishing. The proposed disposal sites at Lois/Mott and Miller/Pillar would unreasonably interfere with the public rights to commerce, recreation and fishing. The two dumpsites would effectively eliminate two commercial fishing grounds that are depended upon by families in the resource-dependent communities along the Columbia River Estuary.

Response: This comment is not based on the project included in the application to the State. In addition, restoring scarce marsh habitat in the estuary is entirely consistent with the public trust doctrine.

The filling up of the Lois/Mott Island embayment would also impact the potential for development at the Tongue Point facility. Recreational fishers, boaters, and water-sport enthusiasts also routinely enjoy these areas.

Response: Again this comment is based on the proposal in the Draft SEIS, rather than the proposal in the Final SEIS. In any case no information is provided to indicate why marsh habitat will affect potential for development at Tongue Point. See also previous responses regarding impacts to Tongue Point facilities, recreational fishers. Boaters and water-sport enthusiasts typically only transit through the Lois Island embayment area along the channel adjacent to the MERTS dock; very little use is made of the bulk of the embayment.

Disposal at these sites would eliminate ESA-listed salmonid habitat.

Response: See earlier response. NOAA Fisheries and the U.S. Fish and Wildlife Services disagree with this comment.

5. *Projects involving fill may be approved only if the following alternatives are examined and found to be infeasible:*
 - a. *Construct some or all of the project on piling;*
 - b. *Conduct some or all of the proposed activity on existing upland;*
 - c. *Approve the project at a feasible alternative site where adverse impacts are less significant.*

Existing dredged material disposal sites exist in the area and would provide feasible alternatives to disposal at the undesignated sites proposed in the SEIS. Upland sites are preferred, as they allow for the beneficial use of the dredged material while minimizing impacts to the aquatic environment.

Response: This comment again misses the point, restoring scarce marsh habitat by raising the elevation of artificially deepened areas can occur in very few locations in the estuary. Clearly it cannot occur on pilings or at an upland site. The County has identified no other 192 acre site in the estuary that could be raised to create marsh where the impacts would be less significant.

Enclosure 1

S4.239. Fish and Wildlife Habitat. This subsection applies to uses and activities with potential adverse impacts on fish or wildlife habitat in Columbia River Estuary aquatic and shoreland areas.

2. *In-water construction activity in aquatic areas shall follow the recommendation of state and federal fisheries agencies with respect to project timing to avoid unnecessary impacts on migratory fish.*

The project does not include the use of timing windows for dredging or flow-lane disposal in the Estuary. Disposal into the proposed sump for the Lois/Mott Island embayment dumpsite will occur prior to the designated in-water work period for the Columbia River Estuary.

Response: See response to policy 3 of P20.5 - Dredging and Dredged Material Disposal.

3. *Uses and activities with the potential for adversely affecting fish and wildlife habitat may be approved only if the following impact mitigation actions are incorporated into the permit where feasible. These impact mitigation actions are listed from highest to lowest priority:*
 - a. *Avoiding the impact altogether by not taking a certain action or parts of an action;*
 - b. *Minimizing impacts by limiting the degree or magnitude of an action and its implementation;*
 - c. *Rectifying the impact by repairing, rehabilitating, restoring the affected environment (this may include removing wetland fills, rehabilitation of a resource use and/or extraction site when its economic life is terminated, etc.);*
 - d. *Reducing or eliminating the impact over time by preservation and maintenance operations.*

No mitigation for impacts to fish and wildlife habitat is proposed.

Response: This statement is factually inaccurate. The project includes numerous measures to avoid, minimize, or restore conditions. With regard to Lois/Mott the Corps avoided impacts by redesigning the feature to respond to public comments to not “take part of the originally proposed action.”

4. *Projects involving subtidal or intertidal aquatic area fill or intertidal aquatic dredging with the potential for adversely affecting aquatic habitat must provide compensatory mitigation, consistent with Mitigation and Restoration Standards (subsection S4.218).*

Subtidal aquatic area is proposed at both Lois/Mott Island and Miller/Pillar yet no mitigation is proposed for these proposed dumpsites.

Response: The purpose of the fill at both sites is to restore functions and values. The fill should result in a net increase in functions and values on site. No mitigation is required under this policy. In addition, the State of Oregon should carefully consider the precedent that would be set by requiring an applicant to provide compensatory mitigation for a restoration project. Taken to its logical conclusion restoration would never conclude because the applicant would need to provide mitigation for the mitigation that it provided for the restoration.

S4.242. Water Quality Maintenance. The standards in this subsection are intended to help protect and enhance the quality of water in the Columbia River Estuary. Impacts on water quality in aquatic areas and in tidelgated sloughs in shoreland areas are covered.

3. *The potential adverse impacts on water quality from dredging, fill, in-water dredged material disposal, in-water log storage, water intake or withdrawal, and slip or marina development will be assessed during permit review. Parameters to be addressed include:*
 - Turbidity
 - Dissolved oxygen

- Biochemical oxygen demand
- Contaminated sediments
- Salinity
- Water temperature
- Flushing

Adverse water quality impacts from the project will occur as demonstrated by the States previous denials of the §401 certification. The current §401 certification process will assess additional water quality impacts, particularly increased effects of low level contaminants in the environment as a result of additional estuarine in-water disposal.

Response: The Corps has conducted additional analysis of water quality impacts, has prepared the SEIS and has submitted a new application for 401 certification with the Department of Environmental Quality.

6. *Estuarine aquatic area pesticide and herbicide application will be controlled by the Department of Environmental Quality and by the Department of Agriculture.*

The Corps is proposing to apply Rodeo to Purple Loosestrife in an attempt to control this non-native species. Although an admirable project, it provides little benefit to the estuary in the context of channel deepening. Additionally, Glyphosate is the primary ingredient in Rodeo. Multiple toxicity reports for glyphosate indicate that it is of concern for environmental reasons, in particular its effects on the aquatic environment. It is moderately toxic to fish. The use of glyphosate-based products may result in population losses of a number of terrestrial species through habitat and food supply destruction and thus threaten endangered species and biodiversity. Glyphosate is a broad spectrum, non-selective herbicide which kills all plants and has the potential to impact native species in the application area.

Response: The Corps will comply with all applicable requirements of the Environmental Protection Agency, the Department of Environmental Quality and the Department of Agriculture for the application of glyphosate. The Corps will develop an integrated pest management plan that will be developed in concert with and reviewed by NOAA Fisheries and the U.S. Fish and Wildlife Service.

FINDINGS:

- 1) This project will have a direct effect on Oregon's Coastal Zone.
- 2) This review in no way replaces or reduces the requirement for obtaining permits from Clatsop County for all dredged material disposal actions associated with this project (or any other) that are proposed to take place within the County.
- 3) This project is not currently consistent with the Clatsop County Comprehensive Plan, the Land and Water Use and Development Ordinance, the Columbia River Estuary Aquatic Use and Development Standards, or the Columbia River Estuary Dredged Material Management Plan based on the above discussion and summarized below:
 - **Timing widows:** The dredging and dredged material disposal is scheduled to take place during all months of the year for two consecutive years with no timing windows that would minimize harm to biological productivity and fishing activities. Timing windows are necessary to comply with the SMMP.

Response: This finding as discussed above, is factually inaccurate. See timing window responses.

- **Lack of coordination:** All applicable County documents contain multiple references to the need for coordination with local fishing interests to minimize interference with both commercial and recreational operations.

Response: The DSEIS and FSEIS constituted public notification and involvement in the planning process.

Dredging orders issued by the Corps must be sent to the affected jurisdiction to ensure continued consistency and compliance with local regulations.

- **Disposal in areas deeper than 65 feet:** In-water disposal must occur between 25 and 65 feet to be consistent with County regulations. The current project proposal states that disposal will occur in depths greater than 65' downstream from river mile 5 and in various locations between river miles 29 and 40.

Response: The Corps consistency determination indicates that it will apply for an exemption as provided for in the Clatsop County plan.

- **Upland disposal:** Upland disposal is planned for sites that are not currently designated as disposal sites in the adopted dredged material management plan.
- **In-water disposal:** Estuarine in-water disposal is planned for sites that are not currently designated as disposal sites in the adopted dredged material management plan.

Response: The AC-2 zone allows Estuarine Enhancement and related fills, such as those proposed for Lois Mott and Miller Pillar.

- **Lack of information:** Impacts to the estuarine environment outside of the Navigation Channel are insufficiently understood to be able to demonstrate that the project as proposed will result in no effects on erosion, sedimentation, increased flood hazard, side channel circulation, destabilization of fine-textured sediments, over-channelization, siltation, or other undesirable changes in circulation.
- **Sediment Characterization:** The samples included in the FEIS were not characterized to the same standard that are required of local dredging projects in the area. Several of the samples presented exceeded criteria set forth by NOAA Fisheries for DDT levels for similar dredging projects in the Columbia River Estuary. Low level PAH's and PCB's are a concern for local dredging projects.

Response: Please refer to the response provided for Standard 5 for S4.232

- **State Water Quality standards:** The project does not meet the state water quality standards or beneficial uses. These standards will be exceeded by short-term impacts from dredging and disposal. The long-term impacts are insufficiently understood to be able to determine whether or not they support these standards.

Response: Oregon Department of Environmental Quality will make this determination.

- **Analysis of Alternatives:** The project proposal fails to consider alternatives to the actual deepening itself, as well as alternatives to specific disposal sites. There are many available beneficial use sites that could be utilized in the area instead of using

flow-lane disposal. Local regulations repeatedly calls for alternatives to be considered and impacts to be minimized. This plan does neither.

Response: The 1999 FEIS presents the alternatives considered by the Corps to deepening the Channel. Several Corps documents review alternative disposal sites. The County fails to identify any specific beneficial use sites.

- **Clatsop County Economy:** The project includes dredging and disposal practices that directly conflict with Clatsop County economic goals, specifically the proposed Miller/Pillar and Lois/Mott disposal sites.

Sincerely,

Bill Arnold

Cc: Russell Harding, DEQ

Enclosure 1